

App. No. 10/669,275  
DN: PCRC 8472U1

### **Amendments to the Drawings**

Two replacement sheets containing revised Figs. 1 and 2, and new Figures 3 and 4 are submitted to replace the original Figs. 1 and 2.

Attachment: Two Replacement Sheets containing Figs. 1,2, 3, and 4.

**REMARKS**

Claims 5 and 10-24 are pending. Claims 5 and 10-24 are rejected. Claims 10 and 13 are amended herein. Claims 11-12 are canceled herein.

**Drawings**

The Examiner objects to the drawings as not showing all the elements of claim 11. Claim 11 is cancelled herein.

The Examiner objects to the drawings as failing to show enough structural detail. Revised Figures 1-4 are submitted herein.

Applicant respectfully requests withdrawal of the Examiner's objections to the drawings.

**Rejection of Claims 5 and 10-24 Under 35 U.S.C. §112.**

Claims 5 and 10-24 are rejected under 35 U.S.C. §112 as failing to comply with the enablement requirement. Specifically, the Examiner asserts that the drawings submitted on 1/25/2010 will not allow any fluid to be pumped in the way described in the specification, because the piston 8 is shown as connected to piston end cap 7.

Applicant submits revised Figures 1-4 which better depict the pump as described in the specification. In the revised drawings, the piston end cap 7 is held in place within the counter bore 30 of the first housing end cap 2 as described in the specification on

page 8. Therefore, Figures 1-4 do not show the piston 8 as connected to the piston end cap 7.

Claims 11-24 are rejected under 35 U.S.C. §112, first paragraph as failing to comply with the written description requirement. In addition, Claims 11-24 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter. Claims 11 and 12 are cancelled herein.

Applicant submits that the claims are enabled and meet the written description requirement. Therefore, applicant respectfully requests that Examiner withdraw the rejection of claims 5, 10, and 13-24 under 35 U.S.C. §112.

**Rejection of Claims 5 and 10 Under 35 U.S.C. §103.**

Claims 5 and 10 are rejected under 35 U.S.C. §103(a) as being unpatenable over U.S. Pat. No. 5,073,095 issued to *Thomas* (hereafter referred to as “*Thomas*”) in view of U.S. Pat. No. 6,368,084 issued to *Skillman* (hereafter referred to as “*Skillman*”), in further view of U.S. Pat. No. 1,908,092 issued to *Whitted* (hereafter referred to as “*Whitted*”).

Applicant respectfully traverses the Examiner’s rejection of those Claims under 35 U.S.C. § 103. Applicant submits that the prior art references do not contain all the claim limitations of Claim 5, as required to establish a *prima facie* case of obviousness. “[T]he KSR opinion only focused on the Federal Circuit’s strict use of the TSM [teaching, suggestion, motivation] test in performing the obviousness analysis; it did not mention or

affect the requirement that each and every claim limitation be found present in the combination of the prior art references before the analysis proceeds.” *Abbott Laboratories v. Sandoz, Inc.*, 544 F.3d 1341 (Fed. Cir. 2009).

The Examiner has not shown that all elements of any of claim 5 are found in *Thomas*, or in the combination of *Skillman* and *Whitted*. Specifically, none of the cited references disclose “a coil assembly capable of operating the piston assembly at a frequency of between about 30 Hz and about 50 Hz to generate a fuel pressure of between about 5 psig and about 15 psig at a minimum flow rate of about 20 pounds of fuel per hour”.

The Examiner acknowledges that the cited references do not specifically suggest or disclose such an element. (Office Action, 6/17/10, pg. 8) Based on MPEP 2144.05 Optimization of Ranges, the Examiner contends that the cited references “disclose[] the general conditions of the claimed invention” and that “discovering the optimum or workable ranges involves only routine skill in the art.” However, the Examiner fails to make a prima facie rejection because none of the cited references disclose the general conditions. In fact, none of the cited references disclose any general or specific range of frequency, pressure, or flow rate. I order for the claims to have merely “optimized” a range, the cited references would first have to disclose one.

Applicant respectfully contends that the cited references fail to suggest or disclose at least one element specifically required by independent Claim 5, and

therefore, the Examiner fails to establish a *prima facie* case of obviousness against independent Claim 1 or Claim 20.

The combination of elements from the cited references would not have been predictable to one of ordinary skill in the art. “When the prior art teaches away from combining certain known elements, discovery of successful means of combining them is more likely to be nonobvious.” *KSR Int’l Co. v. Teleflex, Inc.*, 127 S.Ct. 1727, 82 USPQ2d 1385 at 1396 (2007).

Specifically, the Examiner contends that the check ball valve disclosed in *Skillman* is an obvious variant of the check valve in *Thomas*. However, one would not combine the *Skillman* check valve with *Thomas* because *Thomas* expressly requires valve member 32 to achieve the whisper quiet operation. In fact, *Thomas* teaches away from such a combination, stating, “Reciprocating piston electromagnetic fluid pumps for the most part are quite noisy.” Adding the ball check valve of *Skillman* would compromise the quit operation of *Thomas*.

In light of the above, Applicant therefore respectfully requests that the Examiner withdraw the rejection of Claims 5, 10, and 13-24 as being obvious under 35 U.S.C. § 103.

**Amendment to the Specification**

The specification has been amended herein to further describe new Figures 3 and 4. No new matter has been added, and Applicant respectfully requests the amendment entered.

**Conclusion.**

Applicant believes the above analysis and the amendments made herein overcome all of the Examiner's objections and rejections and that claims # are in condition for allowance. Therefore, applicant submits that claims # constitute allowable subject matter and should be favorably considered by the Examiner. The Applicant urges the Examiner to issue a timely Notice of Allowance for those claims.

The Commissioner is hereby authorized to charge any additional fees or credit overpayment under 37 CFR 1.16 and 1.17, which may be required by this paper to Deposit Account 162201.

Respectfully submitted,

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